Notes from URGWOM Steering Committee Meeting; March 8, 2007; 10:00 AM; Corps of Engineers Conference Room, Albuquerque

In Attendance:

Steven Bowser, USBR

Hilary Brinegar, NMSU

Michael Fies, Corps

Michael Gabora, ISC

Heather Gordon, SAIC/Corps

Conrad Keyes, Jr., Consultant to Corps

Charles Lujan, Tribal Consultant, Ohkay Owingeh Pueblo

Lesley McWhirter, Corps

William J. Miller, WJM Engineering, Inc./Corps

Michael Roark, USGS

Nabil Shafike, ISC

Zhuping Sheng, TAMU

Sue Tillery, NMSU

Edie Zagona, CADSWES

- Mike Roark opened the meeting with a review of the technical team activities. His discussion points are appended to the end of these notes.
- Lesley McWhirter previewed the URGWOM priorities for the upcoming fiscal year.
  - Congress passed a continuing resolution through the end of fiscal year 07, so the actual budget is still unknown. Therefore, the question is: what kind of RiverWare enhancements need funding this year, and what kind of priority should they be given? Enhancements could include upgrading the model for improved accuracy, ease of use, etc.
  - Bill Miller created a Gant chart that reflects the major categories of technical team activities. This chart can be used to get an idea of the schedule of tasks within these categories, which include groundwater/surface water interaction, rules documentation and cleanup, and model review.
  - Edie Zagona posed a question related to the joint contract between the Bureau of Reclamation and the Corps of Engineers: would it be more efficient for those two agencies to use a single contract through the Fort Worth District for work with CADSWES? One contracting vehicle might be more efficient, especially because the Bureau of Reclamation does not have a contracting vehicle this year
- Leslie McWhirter followed with an update on the EIS.
  - The publication of the EIS was delayed while the joint lead agencies discussed storing native water at Abiquiu, and an independent review of the NEPA work within the document was conducted by Corps staff outside the District. However, the decision was ultimately up to the Lieutenant Colonel Bruce Estok , District Commander, who concluded that the EIS is an excellent document that programmatically looks at water use on the Rio Grande, and that tiered NEPA should be used to look at specific actions.
  - There is currently a push to get the EIS published.
  - The Corps is very interested in pursuing a right-of-way and storage of native water at Abiquiu, and hopes to begin the NEPA document related to those issues this year. Abiquiu storage is within the City of Albuquerque easements, so another agency would have to ask the Corps to initiate the NEPA process because the Corps does not own any water. A request to perform this work was received in fiscal year 2007, but the funds are not yet available.

- The Corps continues to use FWS and UNM to do water quality monitoring. Some of the funds have gone to BEMP in support of this project. There is a need to obtain the water quality monitoring database from UNM. However, much of the data is posted on the Bosque School website.

❖ Bill Miller gave an update of the QA/QC plan.

- The QA/QC plan was last reviewed in September 2006. Of the issues discussed then, not all have been resolved.
- Those issues that have been resolved include adding Edie Zagona to the technical review members, changes to the signatory page, and other editorial changes.
- The outstanding issues are with the Bureau of Reclamation and the accounting model. The Bureau of Reclamation believes the accounting model should be for internal use only, while the Corps and the State will release it to the public if asked to do so. Once a resolution has been reached between the different agencies on how to handle the accounting model, there should be no impediment to getting signatures for the entire document. Once the language regarding the accounting model has been revised, it will be circulated to get approval.
- Conrad Keyes suggests that the document be changed so that, under cooperators, the office locations of the last two signatories are included.

❖ Zhuping Sheng delivered a PowerPoint presentation on the Coordinated Database Phase III completion report.

- A cooperative effort exists between Texas A&M, NMSU, and University at Juarez to develop an easily accessible and shared water resources database for model development. There is also work underway to develop a RiverWare model for the Rio Grande reach between Elephant Butte and Fort Quitman; there are many legal constraints on water allocation in that area.
- The Phase III scope of work included:
  - compiling and verifying water quality data;
  - providing access to the data for expansion of the URGWOM model;
  - developing a RiverWare model for the reach between Elephant Butte and Fort Quitman for flood control planning;
  - organizing a RiverWare training workshop;
  - providing technical assistance on FLO-2D;
  - implementing a transfer between the water quality database and hydrologic models.
- Phase III deliverables included:
  - a coordinated database and numerical models;
  - project reports published as technical reports;
  - two RiverWare training workshops held for regional stakeholders;
  - technical comments.
- Plans for future Phases include:
  - enhancing the Riverware model for the Mesilla Basin by emphasizing surface water/groundwater interactions;
  - expanding the RiverWare model for reaches between El Paso and Fort Quitman for flood control purposes;

- assessing management scenarios for containment of storm water to reduce discharge into the river;
- assessing the 2006 flood events in the Hatch and El Paso area using enhanced RiverWare model, in order to determine how the model succeeded and failed.

❖ Sue Tillery gave a PowerPoint presentation on her study of model development.

- The objectives were to develop a conceptual model for surface water/groundwater interactions and a RiverWare model for the lower Rio Grande. The lower Rio Grande flows through basins and high bedrock zones, and is affected differently with respect to infiltration and percolation in those areas.
- The main variables for surface water/groundwater interactions include diversions, conveyance infiltration, and deep percolation from irrigation. Groundwater withdrawals are most highly correlated with withdrawals.
- The model used simulated data for the time period of January 1985 through December 1999, and observed data from December 1999 through January 2005.
- ARIMA (autoregressive integrated moving average) was used to simulate the relationships between diversions and drain return flows.
- The study concluded that the transfer functions were adequate, and the forecasts were highly correlated to the historic flows. ARIMA provides better results than linear equations, but it can be difficult to implement.

❖ The meeting was adjourned.

Technical Team Activities—Mike Roark

MIDDLE VALLEY DEVELOPMENT AND SW/GW INTERACTION

- The construction of the San Felipe to Central test model is complete and all initial data has been put into the model. Calibration is continuing. The topology for the Cochiti to San Felipe portion of the model is complete.
- The Technical Team has been working closely with CADSWES to review the design specifications for the RiverWare-MODFLOW interface. Much of the coding for the interface appears to be completed and we are now discussing the testing of the interface.
- The Technical Team meet with not team members that are developing the RiverWare simulations below Elephant Butte to discuss the development of the RiverWare-MODFLOW interface and weather it was suitable for their future model development. Zhuping gave a presentation at the February Technical Team meeting about the model development for the southern part of the Rio Grande. He also gave a presentation at the annual RiverWare Users Group Meeting on the same subject.
- Mike Roark gave a presentation on the current development of the Middle Valley using all RiverWare objects at the annual RiverWare Users Group Meeting.

UPDATE OF DATA IN HEC-DSS DATABASE

- Update of the DSS data base is continuing. Data for the calibration and use of the new Middle Valley portion of the model is being complied and will soon be entered into DSS.
- There are some slots in the middle valley test model that the DSS interface DMI cannot be used. CADSWES had been contacted about these issues. We are hoping that the problems have been solved in the upcoming build of the model.

SANDIA COLLABORATION

- The technical team has continued to have several two hour meetings to work with Sandia personnel on the simulation with the PowerSim model. We also discussed the interface of the monthly model. The monthly model is now fairly complete and the Technical Team has received an updated copy of the PowerSim monthly model for review.

RULES AND LOGIC DEVELOPMENT

- Craig Boroughs and Tom Stockton have a draft report completed on the rules for review by the Tech Team. The final report is awaiting some changes to the rules that are currently being made.

ACCOUNTING MODEL REVIEW

- Craig Boroughs and Tom Stockton are currently reviewing the accounting model to see if the model can be improved. They are currently putting together a report for the Bureau of Reclamation on their conclusions. Craig gave a presentation of the URGWOM accounting model at the annual RiverWare Users Group Meeting.